

A high-level monthly briefing on operations and activities at the U.S. Department of Energy's Idaho National Laboratory
Work at the lab advances the Department's strategic goals in the areas of energy, environment, defense and science.

■ INL Researchers Share Cybersecurity Expertise

Twenty-five cybersecurity and critical infrastructure protection specialists from INL will be in Orlando, Fla., in early March to teach information technology and computer-security officials from private utilities how to better safeguard their computer control systems from cyber threats. The hands-on training sessions will teach attendees about new and emerging techniques and technology that can better protect the computer systems that operate infrastructures such as the electric power grid, water treatment facilities and telecommunication networks, among others. INL researchers will teach four different training courses, and participate on six panel sessions presenting information on topics ranging from SCADA Security Innovations to Vulnerability Mitigation and Measurement.

■ Hydrogen Production Record Achieved

Earlier this month, INL researchers reached a milestone in producing hydrogen from water using high-temperature electrolysis – 1,000 hours production of at least 100 liters of hydrogen per hour. In November 2004, INL and Ceramtec Inc., Salt Lake City, first announced the significant development of using high-temperature electrolysis to produce hydrogen. This technology enhances the efficiency of the production process by adding substantial external heat to the system – such as high-temperature steam from an advanced nuclear reactor system. The technology is viewed as a crucial first step toward large-scale production of hydrogen from water, rather than fossil fuels.

■ Lab Supports Family Engineering Day

Idaho National Laboratory worked alongside more than a dozen other high tech companies, schools and government agencies to support Boise State University's Family Engineering Day on Feb. 4. INL's Steve Johnson joined NASA's Hal Weaver to talk with parents, teachers and students about the space agency's recent launch of its pioneering New Horizons probe that's even now hurtling toward Pluto. The small spacecraft's multiple science experiments are being powered by a rugged and highly efficient "space battery" produced at Idaho's national laboratory. Family Engineering Day at BSU, presented as part of National Engineering Month, attracted a crowd estimated at more than 2,500.

■ NASA Team Drills for Answers in Idaho

Two Jet Propulsion Laboratory representatives from NASA's Mars Exploration Program are in Idaho Falls to oversee robotic drilling field tests at INL that approximate drilling on Mars, through layers of subsurface basalt. Two drilling teams of engineers, sponsored by separate private contractors, are evaluating the performance of their prototypes to potentially drill 20 meters beneath the surface of the red planet. This is the second of four proposed drilling tests around the country in a variety of geological conditions that enable drilling technologies to achieve higher levels of technology readiness. For more information, visit NASA's Mars Technology Program Web site at: <http://marstech.jpl.nasa.gov/content/category.cfm?Sect=MTP&Cat=base&subCat=SSA&subsubCat=>

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